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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,842	11/29/2001	Kosta L. Pelonis	305-01	6401

7590 07/29/2003
Paul & Paul
2900 Two Thousand Market Street
Philadelphia, PA 19103

EXAMINER

JEFFERY, JOHN A

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 07/29/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,842

Applicant(s)

PELONIS, KOSTA L.

Examiner

John A. Jeffery

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley (US2075323) in view of De'Longhi (US4870253). Woolley (US2075323) discloses a covered, sealed radiator heater comprising a plurality of tubular radiator units and fans 18 positioned above the radiator units for directing air onto the radiator units' upper portions enhancing thermal convection. See Fig. 1 and P. 1, col. 2, lines 27-42. The claims differ from the previously cited prior art in calling for the heater to be portable. However, portable radiators are well known in the art as shown by De'Longhi (US4870253) noting col. 1, lines 5-10 where an electrically-heated mobile radiator with diathermal fluid is disclosed so that the heater can be transported to different rooms. In view of De'Longhi (US4870253), it would have been obvious to one of ordinary skill in the art to provide a mobile radiator in lieu of the fixed radiator of Woolley (US2075323) so that the heater can be transported to different rooms thereby heating only desired rooms. The claims differ from the previously cited prior art in calling for an electric heating element within the sealed radiator. Providing an electric heating element within a sealed radiator is conventional and well known in the art as evidenced by De'Longhi

Art Unit: 3742

(US4870253) noting electric heater 4 within the sealed radiator in Fig. 1 so that the diathermal fluid is heated within the radiator as compared to heated at a remote location. By providing an *in situ* electric heater, the radiator fluid can be heated, yet still be portable to transport to other rooms. In view of De'Longhi (US4870253), it would have been obvious to one of ordinary skill in the art to provide an electric heater in lieu of a centralized, remote heat source of Woolley (US2075323) so that the fluid is heated within the radiator thus enabling portability to transport the radiator to other rooms. The claims differ from the previously cited prior art in calling for a centrifugal fan. However, centrifugal fans in portable radiators is conventional and well known in the art as evidenced by De'Longhi (US4870253) noting col. 4, line 22. In view of De'Longhi (US4870253), it would have been obvious to one of ordinary skill in the art to provide a centrifugal fan in the previously described apparatus so that a blower was used that requires relatively small space yet has a high airflow rate thus facilitating portability. The claims also differ from the previously cited prior art in calling for the electric motor driving the fan at low rpm. However, as is well known in the art, the speed of the fan in heat radiators is directly proportional to the convective heating effect. That is, driving a fan at higher speed will result in a greater convective heating effect as compared to lower speeds. For example, Woolley (US2075323) on Page 2, lines 19-28 discloses driving a fan in conjunction with a radiator for heating a room at reduced speed (note "half or other partial speed in lines 26-27) depending on the desired temperature setting. In view of Woolley (US2075323), it would have been obvious to one of ordinary skill in the art to provide a reduced fan speed setting in the previously described apparatus so

Art Unit: 3742

that a reduced convective heating effect was achieved thereby avoiding overheating of the space to be heated. Regarding claims 5 and 6, no criticality is seen in the specific motor rpm values. Furthermore, it is well settled that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233,235 (CCPA 1955). Moreover, courts have held that even if “applicant’s modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art, unless the claimed ranges ‘produce a new and unexpected result from which is different in kind and not merely in degree from the results of the prior art.’” *In re Huang*, 100 F.3d 135, 139 (Fed. Cir. 1996); 40 U.S.P.Q. 2d 1685 (*citations omitted*). Here, one of ordinary skill in the art would know that reducing the motor speed would correspondingly reduce the airflow rate of the fan (see e.g., P. 2, col. 2, lines 19-29 of Woolley) and the specific rpm values claimed are within the scope of routine experimentation by one of ordinary skill in the art.

Response to Arguments

Applicant’s arguments filed have been considered but are not deemed to be persuasive. Applicant argues that because Wooley’s radiator circulates diathermal fluid through the radiator remote from the radiator, it is purportedly not “sealed with respect to the passage of diathermal fluid.” Remarks, Pages 2-3. However, applicant’s

Art Unit: 3742

argument is not commensurate with the claim language. Claim 1 calls for merely “a sealed radiator containing a diathermal fluid....” Despite applicant’s characterization of Wooley, Wooley’s radiator is “sealed” in that the fluid flowing within the radiator tubular units is isolated (i.e., “sealed”) from the ambient environment. If the radiator were not sealed, fluid would leak onto the floor, and the apparatus would simply cease to function as a viable space heater. The limitation is fully met by Wooley.

Applicant next argues that allegedly “[t]here is no reason to believe that cooling the exterior of the radiator enclosed in Wooley’s radiator cabinet by circulating air over exterior [*sic*] would enhance the circulation of diathermal fluid within the radiator.” *Id.* at 3. However, again, applicant’s argument is not commensurate with the claim language. Claim 1 calls for, in pertinent part, the fan to be positioned above the radiator to direct air on the upper portion of the tubular radiator units to cool them “to enhance thermal convection of the diathermal fluid within the tubular radiator units.” (emphasis added.) Enhancing thermal convection of the fluid is different from enhancing circulation. The examiner respectfully submits that the fans of Wooley, which blow air directly on the tubular radiator units, directly influences the temperature of the fluid therein, thus inherently “enhances thermal convection.”

Moreover, applicant’s assertion that Wooley’s fan arrangement would not enhance diathermal fluid circulation since fluid passes through the radiator is mere speculation. Even assuming for the sake of argument that claim 1 positively recited enhancing circulation, it is respectfully submitted that the convective heat transfer

Art Unit: 3742

contributed by the fans would have some inherent effect on the circulation of the fluid within the tubes.

The examiner further respectfully disagrees with applicant's argument regarding the use of an electric heater as a heat source. Applicant contends that the sheer weight of the apparatus would obviate the examiner's motivation for portability. *Id.* at 4.

However, as noted in the rejection, when faced with the problem of heating fluid within radiator tubes, an electric heater has the advantage over steam heat in that, among other things, a remote source of heat (i.e., steam) is not needed. Thus, the unit can be heated with an electric heater mounted the radiator tubes or other radiator structure, thus not only simplifying heating, but rendering the device portable since it no longer needs to be attached to a remote heat source (i.e., via pipes and the like). Therefore, in view of its advantages in terms of portability, weight, and relatively quick heat up and cool down, using an electric heater in lieu of steam heat would have been readily apparent to one of ordinary skill in the art.

Regarding using a centrifugal fan, applicant argues that the cited prior art suggests providing a centrifugal fan above the thermal units as opposed to below the units as in De'Longhi. *Id.* at 5. However, the location of the centrifugal fan in De'Longhi was not a factor in citing the reference. Rather, the advantages of using a centrifugal fan -- as opposed to another type of fan-- was the reason De'Longhi was cited for this limitation. Indeed, the location of the fans above the tubular units is amply demonstrated by Wooley. As noted in the rejection, centrifugal fans are known to those skilled in the art in view of their relatively high airflow rate and relatively small space

Art Unit: 3742

requirement. The skilled artisan would certainly be motivated to use a centrifugal fan in lieu of another type of fan for at least those reasons.

Lastly, the examiner respectfully notes applicant's stated reasons for selecting fan speed for reducing fan noise. However, even though Wooley does not expressly articulate that lowering fan speeds results in lower noise, such a phenomenon is well known in the art. Indeed, such a correlation between fan speed and noise is commonly observed in ordinary fans used in the home. In any event, Wooley does, in fact, teach using multiple fan speeds. Applicant's argument that Wooley's fan speed increase "possibly" would decrease thermal convection of the diathermal fluid is mere speculation. As in the instant invention, blowing air directly on the top of the tubes would have some effect on, and indeed enhance, the "thermal convection" of the fluid. Regarding applicant's argument in the last paragraph of Page 6, as noted previously, applicant's contention that Wooley does not teach enhancing "circulation" of the diathermal fluid is not commensurate with the claim 1 which calls for enhancing thermal convection of the fluid.

Final Rejection

THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 3742

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

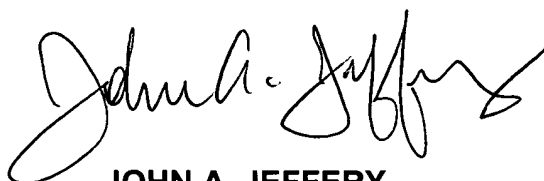
Any inquiry concerning this or earlier communications from the examiner should be directed to John A. Jeffery at telephone number (703) 306-4601 or fax (703) 305-3463. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM EST. The examiner can also be reached on alternate Fridays.

The fax phone numbers for the organization where this application or proceeding is assigned are:

Before Final	(703) 872-9302
After Final	(703) 872-9303
Customer Service	(703) 872-9301

Art Unit: 3742

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0861.

A handwritten signature in black ink, appearing to read "John A. Jeffery", with a stylized flourish at the end.

**JOHN A. JEFFERY
PRIMARY EXAMINER**

7/25/03